

AUC-026
ORDER 18041

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

4802052267

U/R

SAP
17/08/19

D4842-041

Job Sheet 198839



POSITIVE RECALL

Part No: D4842-041

Job Qty: 4 pcs

Part Name: Lower Cutter Assembly



Part Weight: 0 lbs

Job Created: 8/6/19

Due Date: 10/21/19

Type: SOLD

Status: New

Job Tracking No:

Created By: Marie Lajeunesse

Description:

EFFECTIVE 3/8/19 AUTH SAP

RELEASED 55 DATE Aug 29, 2019

9-89

Priority: Medium

Concession Required

Note: URF 16-692 DWG REV B U/R IPP REV:A 13.04.30 NEW ISSUE DD VERF:JLM IPP REV:B 13.11.01 AS PER
DWG REV:B DD VERF:JLM

Ship Via:

Unit released for
for Cassine Costa Plant
no concession req'd

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Packaging 1 - Pick Kit	4 pcs		10/21/19	0.00	0.00	Packaging 1 - 1		
							Packaging 1 - 2		
							Packaging 1 - 3		
							Packaging 1 - 4		
							Packaging 1 - 5		
							Packaging 1 - 6		
							Packaging 1 - 7		
							Packaging 1 - 8		
							Packaging 1 - 9		
							Packaging 1 - 10		
							Packaging 1 - 11		
							Packaging 1 - 12		
							Packaging 1 - 13		
							Packaging 1 - 14		
							Packaging 1 - 15		
							Packaging 1 - 16		
							Packaging 1 - 17		
							Packaging 1 - 18		
							Packaging 1 - 19		
							Packaging 1 - 20		
							Packaging 1 - 21		
							Packaging 1 - 22		
							Packaging 1 - 23		
							Packaging 1 - 24		
							Packaging 1 - 25		
							Packaging 1 - 26		
							Packaging 1 - 27		
							Packaging 1 - 28		
							Packaging 1 - 29		
							Packaging 1 - 30		

PRIORITY

AUG 26 2019

Plex 8/6/19 3:19 PM Dart.lajeunesse.marie

				Packaging 1 - 31	
				Packaging 1 - 32	
				Packaging 1 - 33	
				Packaging 1 - 34	
				Packaging 1 - 35	
				Packaging 1 - 36	
170 Small Fab - 2 - B4B	4 pcs	10/21/19	0.00 9.09	Small Fab - 1 - B4B	
26-08-19 POSITIVE RECALL See Sketch in Enq Notified from Small fab How to assemble this product relating with attached NCR Send 19/08/26 STEP WILL BE AMENDED ACCORDINGLY 19/08/26				Small Fab - 2 - B4B	
				Small Fab - 3 - B4B	
				Small Fab - 4 - B4B	
				Small Fab - 5 - B4B	
				Small Fab - 6 - B4B	
				Small Fab - 7 - B4B	
				Small Fab - 8 - B4B	
180 QC 5	4 pcs	10/21/19	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	
				QC 5 - 50	
				QC 5 - 30	
				QC 5 - 40	
				QC 5 - 61	
				QC 5 - 81	
190 Packaging 3-1 - Stock - B4B	4 pcs ✓	10/21/19	0.00 0.00	Packaging 3 - 1 - B4B	
Wed 8-28-2019 Oscar				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	

AUG 28 2019

AUG 28 2019

DAG
40
9-88

Concession

					Packaging 3 - 27 - B4B	
					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 - B4B	
					Packaging 3 - 36 - B4B	
					QC 21 - SA - 21	→
200 QC 21 - SA	4 pcs ✓	10/21/19	0.00	0.00	QC 21 - SA - 70	21
					QC 21 - SA - 53	9-66

Consession

21 AUG 28 2019

Part Op 100 - (Pick Kit)

Descriptions: 170 - Assemble as per dwg and apply loctite 598 on all faying surfaces.

180 - (QC5- Inspect part completeness to step on W/O)

190 - (Identify as per dwg & Stock Location: _____)

200 - (QC21- Final Inspection - Work Order Release)

S 173363 exp: 12/20

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D4839-1	Blade CCK128	8 pcs (2 ea)	100-Packaging 1 - Pick Kit	6xS1998 43
D4842-1	Lower Cutter Deflector CCK835	4 pcs (1 ea)	100-Packaging 1 - Pick Kit	8186339
D4842-3	Lower Cutter Body, LH	4 pcs (1 ea)	100-Packaging 1 - Pick Kit	5200813
D4842-4	Lower Cutter Body, RH	4 pcs (1 ea)	100-Packaging 1 - Pick Kit	5154870
MS21042L08	Nut ST303. over 7	24 Ea (6 ea)	100-Packaging 1 - Pick Kit	2151102 S 205 000
MS27039-08-19	Screw GA015	24 Ea (6 ea)	100-Packaging 1 - Pick Kit	5201496
NAS1149FN832P	Washer (AN960-8) ST263 ST260	48 Ea (12 ea)	100-Packaging 1 - Pick Kit	5191300

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Packaging 1 - Pick Kit	D4839-1	8	13	0
	D4842-1	4	10	0
	D4842-3	4	8	0
	D4842-4	4	10	0
	MS21042L08	24	611	0
	MS27039-08-19	24	421	0
	NAS1149FN832P	48	1,756	0

Part Specifications

Specifications could not be found.

Plex 8/6/19 3:19 PM Dart.lajeunesse.marie

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐



DISPOSITION		DEPARTMENT/PROCESS					
Job: _____	Rework ☐	Skid-tube ☐	Cross tube ☐	Eng. (Non-AW) ☐	Engineering ☐		
Part No. _____	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Water Jet ☐		
	Use-as-is ☐	Large Fab ☐	Finishing ☐	Rec/Store/Packaging ☐	Supplier ☐		
Date: _____	Sequence #: _____	QTY Affected: _____				MRB (QS1042) ☐	
Description Work Order Deviation		Disposition					
Root Cause		FAULT CATEGORY					
Operator ☐	Pressure/Forced ☐	Contamination ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Manufacturing Process ☐	Bending ☐	Misaligned/off center ☐	Folio/Program ☐	Outside Tolerance ☐			
Equip/Tooling ☐	Crushing ☐	BOM/Route ☐	Grain Direction ☐	Drawing ☐			
Handling/Preservation ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Finish ☐			
Material ☐	Crimp/kink/Ripple/Wave/Twist ☐	Incomplete/Unclear Instructions ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Product Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Out of Sequence ☐	Misread ☐			
Process Improvement ☐	Mislabeled ☐	Fit/Function ☐	Off-set/Set-up ☐				
Human Factors ☐	Other/Details: _____						
		Completed By _____					
		Lead hand / Supervisor _____					
		QC / QA Coordinator _____					

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only



NCR No. _____

Job: 198839

Part No. D4842-041

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐

DEPARTMENT/PROCESS

Skid-tube Machining ☐
Large Fab ☐
Cross tube ☐
Small Fab ☐
Finishing ☐
Eng. (Non-AW) ☐
Prod. Eng. Coord. ☐
Rec/Store/Packaging ☐

Engineering ☐
Water Jet ☐
Supplier ☐
Quality ☐

Date: _____

Sequence #: _____

QTY Affected: _____

Description Work Order Deviation

Disposition

Completed By

DRB (AS1042)
51 19/08/13
9-89

Lead hand / Supervisor

SMR
19/8/29

QC / QA Coordinator

68
9-89

AUG 30 2019

Root Cause

Operator ☐
Manufacturing Process ☐
Equip/Tooling ☐
Handling/Preservation ☐
Material ☐
Product Improvement ☐
Process Improvement ☐
Human Factors ☐

FAULT CATEGORY

Pressure/Forced ☐
Bending ☐
Crushing ☐
Cracks ☐
Crimp/Kink/Ripple/Wave/Twist ☐
Marks/Chatter ☐
Mislabelled ☐
Contamination ☐
Misaligned/off center ☐
BOM/Route ☐
Broken/Damage/Defect ☐
Incomplete/Unclear Instructions ☐
Drill Holes ☐
Fit/Function ☐
Power Loss/Surge ☐
Folio/Program ☐
Grain Direction ☐
Weld ☐
Wrong Stock Pulled ☐
Out of Sequence ☐
Off-set/Set-up ☐

Other/Details: _____

Use 3 bolts with plastic washers and nuts at the base of the cable cutter (Feed/Aid/Act) to secure all parts together for the curing time.
X Make sure Bolts are snug for the curing time periods
X Remove bolts/washers/nuts after cure time before heading to QC

COMPLIED WITH



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

ORDER ACKNOWLEDGEMENT

CUSTOMER

Customer Code: CAGUS03

Sold To: Leonardo S.p.a

Piazza Monte Grappa 4
00195 Rome
Italy
Phone: 39 0331 2292068
Fax: +39 0331 229730

Ship To: Leonardo S.p.a

Via Giovanni Agusta 520
21017 Cascina costa di Samarate
Italy
Phone: +33 1 225125

ORDER

Order No : 18041

Date: 7/22/19

Ship-To Contact: Antonella Diluca

Email: antonella.diluca@leonardocompany.com

Cust PO No: 4802052267

FOB: Shipping Point

Ship Via:

Freight Terms: PrePaid

Terms: Net 30

INCO Terms: Ex Works

Order Taker: Lacey Cantin

Order Taker Phone:

Order Taker Email: lcantin@dartaero.com

Line No	Due Date	Ship Date	Part	Description/Note	Quantity	Unit	Price	Unit	Extended Price
1	9/1/19	9/1/19	D4842-041	Lower Cutter Assembly LINE 010	1	pcs	\$3,750.00	pcs	\$3,750.00
2	7/23/19	7/23/19	D4822-1	Upper Deflector, LH LINE 020	1	pcs	\$5,750.00USD	pcs	\$5,750.00 USD
3	7/23/19	7/23/19	D4822-2	Upper Right Deflector LINE 030	1	pcs	\$5,750.00USD	pcs	\$5,750.00 USD
4	9/1/19	9/1/19	D4821-1	Windshield Deflector LINE 040	1	pcs	\$5,950.00	pcs	\$5,950.00
5	9/1/19	9/1/19	D4840-041	Upper Cutter Assembly LINE 050	1	pcs	\$3,250.00USD	pcs	\$3,250.00 USD

Sub Total \$24,450.00

Grand Total \$24,450.00

ORDER NOTES

FREIGHT INSTRUCTIONS:FOR ENVELOPES, BOXES UP TO 70 KGS EACH - USE DHL AIR ACCT # 955489235 TO VERIGATE - GOODS UP TO 1000 KGS - UPS-SCS , GOODS OVER 1000KGS - BY SEA, AW CONTACT IS CAPUTO MIRKO - mirko.caputo@agustawestland.com Ph.+39 0331 229 116-



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200
Fax 613 632-5246

Container Trace

S208989 Container Trace - Upstream

Output Container No	Depleted Serial No	Status	Part No/Material	Operation Code	Op No	Depleted Date	Depleted Qty	Unit	Location	Serial No/Batch	Job No	Workcenter Code	Manufacturer Part No	Manufacturer Code
S129443	S129446	Stock	M707516S1.000X5.000	Receive Ft	100	11/20/2018 10:57 AM	12.0400	ft	MAT					
S154861	S129443	Allocated	M707516S1.000X5.000	Receive Ft	100	2/19/2019 3:54 PM	3.6250	ft	Bandsaw - 1	PO041410				
S154870	S154861	Allocated	M707516S1.000X5.000	Bandsaw - 1	100	2/19/2019 4:04 PM	3.6240	ft	Bandsaw - 1	PO041410	189787	Bandsaw - 1		
S170367	S132658	Stock	MSTEEL-A2-B0.500X1.250	Receive Ft	100	4/8/2019 10:52 AM	23.1600	ft	MAT009-F	S132658				
S170370	S132658	Stock	MSTEEL-A2-B0.500X1.250	Receive Ft	100	4/8/2019 10:54 AM	0.1600	ft	MAT009-F	S132658				
S170371	S170367	Allocated	MSTEEL-A2-B0.500X1.250	Bandsaw - 1	100	4/8/2019 10:54 AM	23.0000	ft	Bandsaw - 1	S132658	192306	Bandsaw - 1		
S186338	S173627	Stock	M707516S0.375X5.000	Receive Ft	100	6/2/2019 7:51 AM	6.5040	ft	MAT004	S132658	192306	Bandsaw - 1		
S186339	S186338	Allocated	M707516S0.375X5.000	Bandsaw - 1	100	6/2/2019 7:52 AM	6.5040	ft	Bandsaw - 1	S173627	194945	Bandsaw - 1		
S186556	S183848	Allocated	M707516S1.000X5.000	Receive Ft	100	6/7/2019 1:02 PM	4.8240	ft	Bandsaw - 1	S183848				
S186558	S183848	Allocated	M707516S1.000X5.000	Receive Ft	100	6/7/2019 1:04 PM	0.0420	ft	Bandsaw - 1	S183848				
S186559	S188556	Allocated	M707516S1.000X5.000	Bandsaw - 1	100	6/7/2019 1:04 PM	4.7820	ft	Bandsaw - 1	S183848	193033	Bandsaw - 1		
S186559	S188558	Allocated	M707516S1.000X5.000	Bandsaw - 1	100	6/7/2019 1:04 PM	0.0420	ft	Bandsaw - 1	S183848	193033	Bandsaw - 1		
S199842	S170371	Stock	646.9711	QC 21 - SA	190	7/23/2019 1:07 PM	20.0000	pcs	CKK107	S170371	192306			
S199843	S199842	Allocated	646.9711	Packaging 1 - Pick Kit	100	7/23/2019 1:08 PM	20.0000	pcs	Packaging 1 - 9	S170371	197335	Packaging 1 - 9		
S200813	S188559	Allocated	D4842-3	Conventional Mill - 1	115	7/26/2019 10:49 AM	8.0000	pcs	Conventional Mill - 1	S188559	R198348	Conventional Mill - 1		
S208920	S199843	Stock	D4839-1	QC 21 - SA	130	8/26/2019 3:33 PM	6.0000	pcs	CKK128	S199843	197335			
S208925	S205000	Stock	MS21042L08	Receive Ea	100	8/26/2019 3:34 PM	24.0000	Ea	ST303	S205000				
S208926	S204996	Stock	MS27039-08-19	Receive Ea	100	8/26/2019 3:34 PM	24.0000	Ea	GA015	S204996				
S208927	S191300	Stock	NAS1149FN832P	Receive Ea	100	8/26/2019 3:34 PM	48.0000	Ea	ST263	S191300				
S208985	S154870	Stock	D4842-4	QC 21 - SA	190	8/26/2019 3:53 PM	4.0000	pcs	Concession	S154870	189787			
S208986	S200813	Concession	D4842-3	QC 21 - SA	190	8/26/2019 3:53 PM	4.0000	pcs	Concession	S200813	R198348			
S208989	S208925	Allocated	MS21042L08	Packaging 1 - Pick Kit	100	8/26/2019 4:00 PM	24.0000	Ea	Packaging 1 - 9	S205000	198839	Packaging 1 - 9		
S208989	S208926	Allocated	MS27039-08-19	Packaging 1 - Pick Kit	100	8/26/2019 4:00 PM	24.0000	Ea	Packaging 1 - 9	S204996	198839	Packaging 1 - 9		
S208989	S208927	Allocated	NAS1149FN832P	Packaging 1 - Pick Kit	100	8/26/2019 4:00 PM	48.0000	Ea	Packaging 1 - 9	S191300	198839	Packaging 1 - 9		
S208989	S208919	Allocated	D4839-1	Packaging 1 - Pick Kit	100	8/26/2019 4:00 PM	2.0000	pcs	Packaging 1 - 9	S191429	198839	Packaging 1 - 9		
S208989	S208920	Allocated	D4839-1	Packaging 1 - Pick Kit	100	8/26/2019 4:00 PM	6.0000	pcs	Packaging 1 - 9	S199843	198839	Packaging 1 - 9		
S208989	S186339	Allocated	D4842-1	Packaging 1 - Pick Kit	100	8/26/2019 4:00 PM	4.0000	pcs	Packaging 1 - 9	S186339	198839	Packaging 1 - 9		
S208989	S208986	Allocated	D4842-3	Packaging 1 - Pick Kit	100	8/26/2019 4:00 PM	4.0000	pcs	Packaging 1 - 9	S200813	198839	Packaging 1 - 9		
S208989	S208985	Allocated	D4842-4	Packaging 1 - Pick Kit	100	8/26/2019 4:00 PM	4.0000	pcs	Packaging 1 - 9	S154870	198839	Packaging 1 - 9		

S208989 Details

Part No	Operation	Material	Status	Quantity	Net Weight	Details	Date	Add By	Job No	Location	Serial No/Batch
D4842-041	QC 21 - SA	Concession	QC 21 - SA	2.0000	0.0000	8/26/2019 4:00 PM	Carol Davis	198839	Concession	S208989	
Part No	Operation	Material	Status	Quantity	Net Weight	Add Date	Add By	Job No	Location	Serial No/Batch	

S208989 Container Trace - Downstream											
Source Container No	Container No	Status	Part No	Operation Code	Op No	Consumed Date	Consumed Qty	Unit	Location	Serial No/Batch	Job No
S208989	S209611	Allocated	D4842-041	QC 21 - SA	200	8/26/2019 10:38 AM	1.0000	pcs	Packaging 1 - 3	S208989	198839
S209611	S209614	Allocated	D169-841-015	QC 21 - SA	140	8/26/2019 10:39 AM	1.0000	pcs	Packaging 1 - 2	S209614	198806
S209614	S209797	Concession	6F9540V00231	QC 21 - FG	200	8/26/2019 2:21 PM	1.0000	pcs	Concession	S209797	197313
											Workcenter Code
											Packaging 1 - 3
											Packaging 1 - 2

Manuf Doc N	AWC-026	Date	August 29, 2019	AW Doc N		Purchase Order	4802052267
AW P/N	D4842-041	S/N / Batch Number	S208989	Grade	A	AW Drawing Issue	B
Description	Lower Cutter Assembly			Batch Qty	4	Defective Qty	4
Manufacturer	Dart Aerospace LTD			Model	AW169		

Defect(s) Description

1. Leonardo has informed Dart that there are interference issues installing the lower cable cutter D4842-041 (D4842-3 and D4842-4) onto the Leonardo interface bracket
2. The grain direction on the D4842-1 (D4842-041 Lower Cutter Deflector), Deflector was deviated from the approved Data. The proposed change to the drawing is attached in engineering evaluation.

Department	Inspector	Signature	Date
Quality Assurance	DAS 55 9-89 DAS-55-9-89	 Marcel Daviau	Aug 29, 2019

Defect(s) Cause

1. The Lower Cutter body has a dimension of 0.43 +0.01/-0.00. This dimension was reported as part of the approved FAI and has been met with all delivered product
2. Dart Hawkesbury Design Engineer has modified the approved drawing to allow for manufacturing to minimize in material waste.

Department	Inspector	Signature	Date
Quality Assurance	DAS 55 9-89 DAS-55-9-89	 Marcel Daviau	Aug 29, 2019

Corrective Action

1. In order to mitigate the interference issue for Leonardo, Dart is proposing removing 0.010" (0.254 mm) from each face of the lower cutter body for a total gain of 0.020" (0.508 mm).
2. Dart Aerospace HBY requesting drawing update to allow for grain direction change on D4842-1

Department	Inspector	Signature	Date
Quality Assurance	DAS 55 9-89 DAS-55-9-89	 Marcel Daviau	Aug 29, 2019

For "MANUFACTURER" SUPPLIERS ONLY

ENGINEERING evaluation and proposal

Engineering evaluation

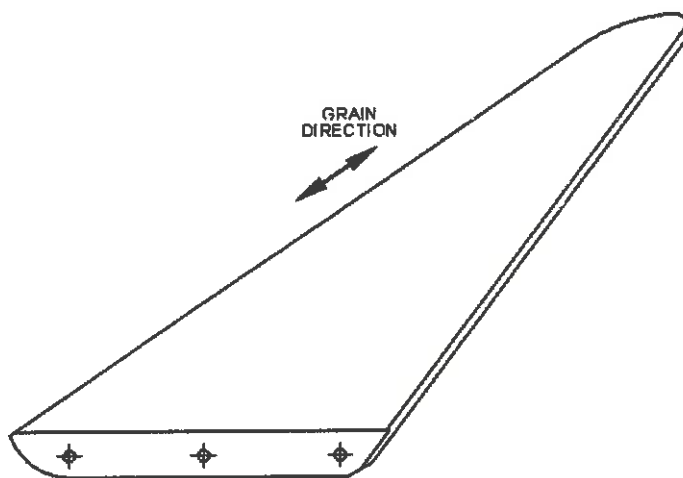
Investigation report

n: NCR18-6764

Compliance report

n... N/A.....

1. Dart's position is that this change will not impact the structural substantiation presented in Report DA169-4 for the lower cutter body since this is not a section with the lowest margin. Therefore removing 0.010" from each part will not impact the structural integrity of the lower cutter assembly. With the tolerance stack-up the lower cutter body would measure 0.84" (21.34 mm) to 0.88" (22.35 mm) which provides an additional 0.002" for variance of the sealant.
2. Grain direction was rotated 56° to align with the leading edge of the deflector. This orientation allows for a smaller raw material blank size and significantly reduce material scrap. The grain direction is still effectively perpendicular to the bending plane from cable loads. The effect on strength is insignificant.



	Defect effects		Limitations
	Before any repair	After any repair	
	☐ yes	☐ yes ☐ no	☐ yes (specify) ☒ no
Safety	☐ yes	☐ yes ☐ no	
Life	☐ yes	☐ yes ☐ no	
Strength	☐ yes	☐ yes ☐ no	
Performances	☐ yes	☐ yes ☐ no	
Interchangeability	☐ yes	☐ yes ☐ no	
Reliability	☐ yes	☐ yes ☐ no	
Maintainability	☐ yes	☐ yes ☐ no	
Installability	☐ yes	☐ yes ☐ no	
Testability	☐ yes	☐ yes ☐ no	
Only aspect	☐ yes	☐ yes ☐ no	
Repair Proposal		Decision to use ☐ Use repaired with specific repair ☐ Use repaired with known repair ☐ Use as is ☐ Use repaired for tests (see Limitations) ☐ Use as is for tests (see Limitations) ☐ Scrap	
Concession Classification	☒ Major ☐ Minor		Submit after repair ☐ yes ☐ no